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MBA – 212

(Following Paper ID and Roll No. to be filled in your Answer Book)

**PAPER ID : 7063**

Roll No.

**M. B. A.**

(SEM. II) EXAMINATION, 2006-07

**PRODUCTION & OPERATIONS MANAGEMENT**

*Time : 3 Hours]*

*[Total Marks : 100*

*Note : Attempt all questions. All questions carry equal marks.*

**1** Attempt any **four** parts of the following : **5×4**

- (a) Explain the different stages in product life cycle and the accompanying characteristics important to manufacturing process technology.
- (b) Bring out the stages in the development of a new product. Explain each stage in brief.
- (c) What is “Operations Management”? What are different decisions taken by Operations Managers for production?
- (d) Describe the various steps involved in process design. Mention the inputs outputs of process design.
- (e) Trace the evolution of production function.
- (f) “Automated production systems have greater Operating Leverage? Discuss this statement.

**2** Attempt any **four** parts of the following : **5×4**

- (a) Briefly describe the problems faced by a manager in managing a project.

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- (b) State and explain the various factors affecting job design.
- (c) “Plant layout involves besides grouping of machinery an arrangement of other facilities also.” Discuss.
- (d) Enumerate and explain the major factors governing plant location.
- (e) What is ‘Line of balance’? Explain the LOB technique.
- (f) There are 8 jobs A, B, C, D, E, F, G and H, which can be processed in any of the 3 machines,  $M_1$ ,  $M_2$  and  $M_3$  in a job shop. The processing times are given in the table:

<b>Job</b>	<b>Processing Time (Hours)</b>
<b>A</b>	<b>12</b>
<b>B</b>	<b>20</b>
<b>C</b>	<b>5</b>
<b>D</b>	<b>15</b>
<b>E</b>	<b>4</b>
<b>F</b>	<b>8</b>
<b>G</b>	<b>6</b>
<b>H</b>	<b>4</b>

Assign the jobs using Longest Processing Time (LPT) rule.

- 3** Attempt any **two** parts of the following : **10×2**
- (a) List the advantages and disadvantages of the following traditional aggregate plans
    - (i) Level capacity plan
    - (ii) Matching Capacity with Aggregate Demand.
  - (b) Explain how the PPC (Production Planning and Control) department works in a manufacturing organization and what are its functions?

(c) How does PPC function change in the three types of production? Explain with reference to differences in the three types of production.

4 Attempt any **two** parts of the following : **10×2**

- (a) What is quality circle? How are quality circle formed? Discuss the formation and working of QC's in an engineering industry.
- (b) Write a note on costs of quality and the approaches that may be taken, which will improve quality, but at a lower cost.
- (c) 10 samples (each of size 100) of a component were inspected. The results of the inspection are given below :

<i>Sample No. :</i>	1	2	3	4	5	6	7	8	9	10
<i>No. of Defections :</i>	2	0		3	1	2	3	1	1	2

Draw the relevant control chart taking 3 sigma limits.

5 Attempt any **two** parts of the following : **10×2**

- (a) Distinguish between 'Method Study' and 'Work Measurement'? What are the steps in performing stop watch time study?
- (b) An 8 hours work measurement study in a plant reveals the following. Units produced = 320 Nos. Idle time = 15%. Performance rating = 120%. Allowance = 12% of Normal time. Determine the standard time per unit produced.
- (c) Highlight the overall goals of TPM and its contribution to quality.